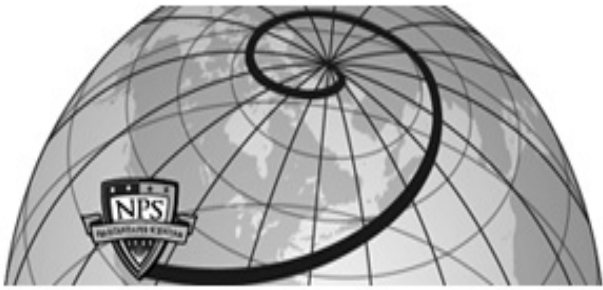

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Comparative analysis of procedures for cyclic inspection and preservation of Navy owned material in store

Brown, Everett G.

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by

Everett G. Brown

Lieutenant Commander, Supply Corps

United States Navy

Submitted in partial fulfillment of
the requirements for the degree of

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ABSTRACT

A vital but often ignored supply function at Navy stocking activities is the periodic inspection and preservation of material in store in order to insure that ready-for-issue material is furnished the operating forces. To implement this function, the activity must (1) conduct a systematic review of the directives promulgated by each of the Navy inventory managers plus the Secretary of the Navy, the Bureau of Supplies and Accounts, and the other Navy Bureaus and Offices, and (2) establish an organized program that will insure implementation of the prescribed procedures for each type of material carried in stock.

The purpose of this study is (1) to examine and summarize the basic cyclic inspection and preservation procedures and the deteriorative material procedures which are promulgated by certain Navy Inventory Control Points for selected categories of material, (2) to determine and summarize the common elements in the procedures and to make comparisons of the requirements imposed by the various inventory managers, (3) to obtain local operating procedures from selected stocking activities for the purpose of determining the effectiveness of the Inventory Control Point directives, and (4) to make recommendations for simplifying and improving the present system.

The writer is indebted to William R. Baker, Commander, Supply Corps, U.S. Navy, for the guidance and assistance he gave during the course of this study. In addition, appreciation is expressed to the many people who provided research material required for this study.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

STATEMENT OF THE PROBLEM

I. THE PROBLEM

Statement of the Problem. The purpose of this paper is (1) to examine and summarize the basic cyclic inspection and preservation procedures which are promulgated by certain Navy Inventory Control Points for selected categories of material; (2) to determine and summarize the common elements in the procedures and to make comparisons of the requirements imposed by the various inventory managers; (3) to obtain local operating procedures from selected stocking activities for the purpose of determining the effectiveness of the Inventory Control Point directives; and (4) to make recommendations for simplifying and improving the present system.

Limitations. A complete and thorough review of all cyclic inspection and preservation procedures and deteriorative material procedures would encompass a review of the procedures for material cognizance symbols from A through Z. Even then, different requirements are imposed within the cognizance symbol in many instances. Due to the limited time available to conduct this study, the review was primarily confined to the procedures imposed by the following Inventory Control Points and the indicated categories of material:

INVENTORY CONTROL POINT	CATEGORIES OF MATERIAL
Fleet Material Support Office	Various types of material under the retail management of the Fleet Material Support Office

Ships Parts Control Center	Ships assemblies and repair parts (cognizance symbol H) and base equipment repair parts (cognizance symbol 2Y)
Ordnance Supply Office	Ordnance material (cognizance symbols A and Z)
Electronics Supply Office	Electronic assemblies and repair parts (cognizance symbol N)
Aviation Supply Office	Aeronautical Material (cognizance symbol R) and Photographic material (cognizance symbol E)

In addition, the review was limited to the inspection, preservation, and packaging actions for "material in store" at the various Navy stocking activities. For the purpose of this paper, material in store will:

1. Include the material on hand in its assigned physical storage location.

2. Exclude new receipts, material turned into store, issues, and shipments.

The various levels and methods of preservation, packaging, and packing were not explored.

This paper is only a beginning in the broad and complex area covering the care and preservation of material. It is hoped that this limited survey will acquaint the reader with the general aspects of the inspection programs for a few types of material and the importance of the program. There are many areas left for which future writers may wish to proceed in this worthwhile field. A few of these are:

1. Review of cyclic inspection and preservation procedures and deteriorative material procedures for categories of material not covered in this paper.

2. Cost effectiveness study to determine the "optimum" quantity of material to be inspected and preserved.

3. Feasibility of centralizing the "cyclic inspection and preservation program" for all types of material within one Navy Inventory Control Point or other agency.

4. Study of packaging and preservation procedures prior to and at the time material enters the Navy Supply System.

II. DEFINITIONS OF TERMS USED

Cognizance Symbol is a two digit numeric and alpha code prefixed to federal stock numbers to identify and designate the inventory control point for a specified category of material.

Critical Items for preservation and packaging purposes are those items which meet one or more of the following criteria:

1. Items having close tolerances, of delicate construction, or of perishable nature, the deterioration of which would result in premature failure or malfunctioning of the item or equipment in which installed, or to which the item is related.

2. Items not necessarily having close tolerances, or delicate construction, or of perishable nature, but which, if deteriorated or contaminated, would endanger personnel, equipment, or facilities by creating unsafe or hazardous operating conditions.

3. Items not meeting either of the above criteria, but which are so constructed that damage or deterioration would result in excessive repair or overhaul costs or create production delays because of long procurement lead time for replacement items.

Cyclic Inspection is the periodic investigation of material condition to ascertain the state of preservation. This investigation is limited to the visual examination necessary to determine the state of preservation.

Cyclic Preservation is the periodic represervation, repackaging, or repacking of material in store on which previously applied protective measures have subsequently matured or deteriorated to a state where renewal of protection is necessary. Preservative packaging applied to material usually matures to a state requiring reconditioning in cycles of three years but may be lengthened or reduced depending upon such factors as storage and climatic conditions, efficiency of packaging materials and the care exercised in the preparation of the original package.

Deteriorative Items are those items which due to physical characteristics become unusable if retained in store over extended periods of time. The term "general deteriorative items" is synonymous with the term "deteriorative items".

Inspection Lot is used in this paper to denote the quantity of preserved and packaged material placed in lots for purposes of preservation inspection. The lot should consist of material of one stock number so that each lot maybe as homogenous as possible. The age of packages, in each lot, should not vary more than twelve months and visibly damaged packages should be excluded as representative of the lot and inspected separately.

Inventory Control is the act of regulating and directing the acquisition, distribution, and disposition of material by or under the direction of an inventory manager.

Inventory Control Point is an organizational unit within the Navy Supply System which is assigned the primary responsibility for the management of a group of items.

Inventory Management is that phase of military logistics which controls the input, availability, and disposal of material in the Naval Establishment.

Item of Supply is an item which is "recurrently used, bought, stocked, or distributed" so that only one distinctive combination of letters or numerals, or both identifies the same item throughout the Department of Defense.

Levels of Preservation, Packaging, and Packing are defined in terms of the amount of processing needed to protect supplies under stipulated conditions. Levels selected for use are determined by the conditions which the packaged item may be expected to encounter enroute to the user. Specific levels (A, B, C) are described in the BUSANDA Manual, Volume II.

Mandatory Shelf Life Items are those items which involve personnel or equipment hazards and are "not" to be retained beyond the original mandatory shelf life assigned.

Material is the general term used to designate supplies, repair parts, and equipment.

Material Cognizance is a term denoting responsibility for exercising inventory management over items or categories of material.

Methods of Preservation and Packaging are determined by the physical characteristics of the specific item to be protected. Specific methods (I, II, III) are described in specification MIL-P-116.

Non-Critical Items for packaging and preservation purposes, are those items not meeting the criteria specified for critical items.

Packing is the application or use of exterior shipping containers or other shipping media, and assembling of items or packages therein, together with necessary blocking, bracing or cushioning, weatherproofing, exterior strapping and marking of the shipping containers.

Preservation and Packaging is the application or use of adequate protective measures to prevent deterioration, including as applicable, the use of appropriate preservatives, protective wrappings, cushioning, interior containers and complete identification marking, up to but not including the exterior shipping container.

Repair Part is an integral manufactured and replaceable part (or assembly) of a piece of machinery or equipment, the part being furnished normally for replacing a part worn or damaged in service. The term "spare part" is synonymous with the term "repair part".

Safe Storage Period is the period of time assigned by a competent authority, usually an Inventory Control Point, for guidance as to the length of time an item may be expected to retain its full functional capability under normal storage conditions.

Shelf Life is the general term used to indicate the extent to which an item can be maintained in storage without significant deterioration.

The term is usually synonymous with the more specific terms "safe storage period" and "storage time limitations".

Stock Number is used as the means of identifying one item of supply.

Stock Unit consists of the smallest quantity used in supply operations such as each, pound, etc. The unit constitutes the basic component element of a stock item.

Storage is the act of storing or the state of being stored; the keeping or placing of property in a warehouse, shed, open area, or any other designated facility. It is a continuation of the receiving operation and is preliminary to the shipping operation.

Storage Time Limitations are used by the Aviation Supply Office to indicate the shelf life for aeronautical material. These limitations do not represent the equipment's ultimate or maximum endurance storage life. The limitations are selected and assigned in such a manner that the affected equipment is withdrawn from ready-for-issue supply before the time that material deterioration begins.

III. REVIEW OF THE LITERATURE

Literature on "material condition" while in store is extremely meager. Efforts have been devoted primarily to the many other facets of inventory management such as procurement, receiving, storing, recording, issues, and shipments.

In "production handbooks" consisting of 1000-2000 pages, the "protection of stores" section seldom exceeds two pages. Alford and Bangs in their Production Handbook at least note that it is "an important

part of every storekeeper's job to protect . . . and moisture. "[1] They also give a few considerations to be taken for different situations.

One reason for the lack of literature on this subject is that the modern business concern is not faced with the military problem of having to maintain a large range and depth of slow moving and insurance type materials. This assumption is partly supported by Melnitsky in his discussion of storeskeeping minus the keeping in the large commercial organization. He noted that a large western oil company tried "to keep materials rolling into the point of use as required and maintain only minimum standby insurance stocks."[2] He further noted that this particular company, in trying to solve the problem of holding spare parts for long periods of time, was attempting to encourage the equipment manufacturers to carry the stocks of spares. Whitin also noted that a major difference between the inventory control problems faced by the military and private industry is the tremendous number of items carried in the military inventory. He estimated that in 1953 in the Navy alone there were more than three million different items as compared to the largest U.S. Corporation, General Motors, with approximately 120,000 items.[3]

Research Significance. No other research papers were located in the U.S. Naval Postgraduate School library on the subject "Cyclic Inspection and Preservation of Material in Store". The only paper that was even closely related to the subject was written by LCDR Robert J. Walsh, SC, USN. In his paper on the broader subject of "Storage of

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[1] L.P. Alford and John R. Bangs, Production Handbook, (The Ronald Press Company, 1947), p. 445.

[2] Benjamin Melnitsky, Management of Industrial Inventory, (Conover-Mast Publications, Inc., 1953), p. 209.

[3] Thomas M. Whitin, The Theory of Inventory Management, (Princeton University Press, 1953), p. 165.

Technical Material", he recognized the part that holding material and maintaining it in store has in the total supply operation.[4]

A few additional papers were located on the general storage aspects, however, they were not pertinent to the specific area of interest covered in this paper.

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[4]Robert J. Walsh, "Storage of Technical Material" (unpublished term paper, U.S. Naval Postgraduate School, Monterey, California, 1957) p. 2.

CHAPTER II

IMPORTANCE OF THE STUDY

I. BACKGROUND

Inventory management has been defined as "that phase of military logistics which controls the input, availability, and disposal of material in the Naval Establishment."[1] A segment of inventory management that is vital to the supply operation is in the "availability" of the material. The fact that an item of supply is received, stored and recorded in the stock records is of little importance when the item at time of need is in an overage or deteriorated condition. In other words, the item must remain in storage in a ready-for-issue condition in order for the item to be available for fulfilling its intended purpose.

The care and preservation of material while in store is a gigantic undertaking as evidenced by the number of line items and the dollar value of Navy owned material on hand in the Navy Supply System as of December 31, 1964. This information is shown in Appendix A. These figures were provided by the Systems Analysis and Procedures Division, Bureau of Supplies and Accounts, in response to a personal request, copy of which is included in Appendix B.

Practically every type of material shown in Appendix A requires some type of inspection for condition while in store. The inspection may vary from a routine cyclic inspection of most categories of stock on hand to a clearly defined control system for aviation material with

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[1] Department of the Navy: Office of Naval Material, Navy Policy and Standards for Inventory Management, (NAVEXOS Publication 1500, 1960), Appendix, p. 3.

a specified storage time limitation. The importance of the inspection program for aviation material was vividly stated by the Aviation Supply Office in that "the use of any overage equipment and piece parts would be a potential flight hazard as well as a factor in increasing fleet maintenance with an ensuing impairment to aircraft availability."[2]

Since the most important purpose of the shore establishment is to support the operating forces, it behooves each and every stocking activity to do its utmost, within the limitations imposed, in providing these forces with material that is in a good usable condition. This will greatly assist in keeping costly and complex equipment in an operating condition.

II. PROBLEMS IN ESTABLISHING AND MAINTAINING AN EFFECTIVE PROGRAM

Establishing and maintaining an effective, efficient and inexpensive cyclic inspection and preservation program is not an easy task. There are many factors and constraints that make the problem extremely difficult. To some activities this probably results in little or no effort being employed in this worthwhile direction. Some of these contributing factors are:

1. Lack of funds and shortage of manpower are most likely the biggest bottlenecks to an effective program. As noted in the Bureau of Supplies and Account's policy on care and preservation of stocks "funding for the care and preservation of stocks has been and will remain on an austere basis."[3] In response to survey questions, copy

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[2]Navy Stock List of the Aviation Supply Office, Section C0015, 1964 p. 3.

[3]Navy Department: Bureau of Supplies and Accounts, Care and Preservation of Stocks, BUSANDA Instruction 4032.3A, 1964 , p. 1.

of which is included in Appendix B, Mr. Herbert M. Lapidus, Head of the Packaging and Preservation Division, Bureau of Supplies and Accounts, advised that the shortage of men and money is still prevailing. He reported that:

> The money situation, as well as the staffing, has been so thin at times that we have had questions like "shall we continue to ship" or "shall we look at the stock" followed by "we can't do both".[4]

2. The Inventory Control Points have issued numerous and sometimes confusing instructions relating to the cyclic inspection and preservation program. These are especially perplexing to an activity which is required to process all of the various types of material. The instructions convey varying degrees of guidance as to how the material is to be inspected, the frequency of the inspection, preservation and packaging instructions and the criteria for determining "what" and "how much" to preserve. This criteria may be based on preferential listings, cyclic lists, and the like. These lengthy and restrictive instructions create a sizeable workload themselves in the interpretation and determination of what is to be accomplished.

3. An activity may not always consider the maintenance of material in store as important as the supply functions that must be accomplished, such as the processing of receipts and issues. One factor that could have some bearing on this problem is the manner in which the work measurement reporting system operates. For instance, "storage custody operations" includes the inspection of material in store along with rewarehousing of material and several other diverse functions. The total effort for

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[4]Herbert M. Lapidus, Personal Letter to E.G. Brown, January 21, 1965.

these functions is based on the sum of total measurement tons of material in storage custody on hand at the end of each month of the reporting period. In other words, an activity that performs no inspections for material condition will be credited with the same number of work units (measurement tons) as an activity that complies with the prescribed regulations for all of the categories of material in store.[5] A copy of the work measurement reporting requirement is illustrated in Appendix C.

III. OBSERVED DISCREPANCIES

A few examples from the office of the Inspector General Supply Corps may help in illustrating the scope of the problem at the stock point level. This information was obtained from LCDR Frederick J. Kirch, SC, USN[6] in response to survey questions, copy of which is included in Appendix B. The findings of the inspectors are given below for three different stocking activities:

> A program for the effective inspection and control of deteriorative material was nonexistent. Numerous items of a deteriorative nature were held in stock though no procedures existed for inspection for survey/extensions of safe storage life to assure that such material did not remain in store, or was not issued, after prescribed shelf life had expired. No records of any kind were maintained regarding the cure/manufacture date of individual shelf life items nor was any attempt made to identify and mark deteriorative items in storage. Various inventory control managers prescribe cyclic statistical sampling techniques for the inspection of designated materials in stock with regard to condition of preservation, and while such inspections were being conducted they did not satisfy the requirements for inspections of specific items for RFI conditions based upon their individual cure/manufacture date.

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[5]Navy Department: Bureau of Supplies and Accounts, BUSANDA Management Handbook, (NAVSANDA Publication 285), p. 5-52.

[6]Frederick J. Kirch, SC, USN, Personal Letter to E.G. Brown, January 22, 1965.

Control of FMSO hazardous retail material was not adequate. Many hazardous material items stored in the Flammable Warehouse were not labeled properly. FMSO Instruction 4450.1 dated 18 June, 1962, sets forth instructions for labeling, handling, and storage of hazardous retail items and lists the items by stock number. Further, this instruction was not readily available to the warehouse supervisor for use in identification of hazardous items.

Various inventory managers require that mandatory shelf life items be disposed of at the expiration of the designated shelf life period. Several items with expired mandatory shelf life were observed. General deteriorative items were also carried and a cursory review revealed one shelf life item which was overage and not inspected. Shelf life of general deteriorative items may be extended in periods equal to one-half of the designated shelf life if upon inspection the material is found to be fit for issue.

CHAPTER III

THE STUDY: PART A

I. RESEARCH METHOD

The purpose of Part A of the study is to examine, summarize and compare the basic cyclic inspection and preservation procedures and the deteriorative (shelf life) material procedures imposed on Navy stocking activities by selected Navy Inventory Control Points. Section II is a brief look at the Secretary of the Navy and the Bureau of Supplies and Accounts objectives and policies in the care and preservation of material in store; Sections III through VII are a summary of the procedures published by certain Inventory Control Points; and Section VIII is a summarization of the various procedures and the common elements among them.

II. GENERAL SYSTEM PROCEDURES

The packaging objectives for the Naval Establishment are promulgated by the Secretary of the Navy.[1] The two objectives particularly applicable to the scope of this paper are:

> 1. Provide efficient and economical protection to supplies, materials, and equipment from physical and mechanical damage during handling, shipment, and storage from the time of original purchase or manufacture until ultimate use.
>
> 2. Assure maximum life, utility, and performance of ready-for issue and repairable supplies, materials, and equipment through prevention of deterioration.

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[1] Department of the Navy: Secretary of the Navy, Packaging Responsibilities Within the Naval Establishment, (SECNAV Instruction 4030.2, 1954), pp. 1-4.

In fulfilling these objectives, Navy Bureaus and Offices are required "to establish and implement procedures, directives, and instructions required to assure that all items under their cognizance are: (1) regularly inspected to determine the state of packaging and the need for repackaging, and (2) repackaged as necessary to insure optimum life and protection until time of use."[2]

In implementing the objectives of the Secretary of the Navy, the Bureau of Supplies and Accounts has stated the policy for inspection and cyclic preservation as follows:

> Cyclic preservation is identified as the represervation, repackaging, or repacking of material in store on which previously applied protective measures have subsequently matured or deteriorated to a state where renewal of protection is necessary. Preservative packaging applied to material usually matures to a state requiring reconditioning in cycles of three years. However, this period may be lengthened or reduced depending upon storage and climatic conditions, efficiency of packaging materials, and the care exercised in the preparation of the original package. Cyclic preservation operations will be kept current by proper scheduling. Only material which will be retained in the Navy Supply System will be cyclic preserved and quantities will not exceed the retention level. For those items for which shelf life limitations have been established by directives of the cognizant technical bureau or office, cyclic preservation procedures will be correlated with technical inspection requirements. Preservation, packaging, or packing which is incidental to overhaul, repair, rehabilitation, modification, or when highly specialized knowledge, skill, or equipment is required to complete the operation will not be undertaken without prior approval and funding from the technical bureau having cognizance of the material.[3]

In addition, the Bureau of Supplies and Accounts issued a directive which promulgated specific guidelines for care and preservation of stocks.[4]

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[2]Ibid.

[3]Department of the Navy: Bureau of Supplies and Accounts, Supply Ashore, (BUSANDA Manual, Volume II), p. 7-31.

[4]Department of the Navy: Bureau of Supplies and Accounts, Care and Preservation of Stocks, (BUSANDA Instruction 4032.3A, 1964) Enclosure 2, pp. 1-3.

Since material entering the supply system is required to be properly packaged and preserved in order to prevent deterioration or other damage to which the material might be subjected during shipment, handling, and storage, the above directive assumes "that materials placed into the supply system commercially packed, or packaged only for physical protection, have been reviewed by the inventory control point and the determination made that the materials are not subject to corrosion or other physical deterioration during transit and expected storage life" and therefore, are not subject to inspection and cyclic preservation.

Two of the guidelines which are of particular significance to later sections of this paper are:

> 1. Technical material in store designated for retention by inventory control points on a specific item listing or ICP annotation on a NAVSANDA Form 483 will be inspected at periodic intervals to determine the need for represervation.
>
> 2. Inspected ready-for-issue stock on which previously applied preservation has deteriorated, as determined by sampling, will be represerved and repackaged. Wherever the original method used for preserving, packaging, or packing the items or equipments can be identified, this same method will be used if the items are to be repackaged. If the method cannot be identified, then protection equivalent to that of the old package (in accordance with the best judgment of the packaging supervisor) will be provided. Overage material will not be represerved or repackaged without instructions from the cognizant inventory control point.

The complete guidelines, fifteen in all, for care and preservation of stocks are included in Appendix D.

III. SHIPS PARTS CONTROL CENTER[5]

Cyclic Inspection List. Each fiscal year the Ships Parts Control

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[5]Department of the Navy: Ships Parts Control Center, Cyclic Inspection of "H" and "2Y" Cognizance Material in Store, (SPCC Instruction 4730.5D, 1964), pp. 1-4.

Center (SPCC) furnishes stocking activities with a cyclic inspection list of items to be given priority in the SPCC inspection program. The categories of material involved include ships assemblies and repair parts (cognizance symbol H) and base equipment repair parts (cognizance symbol 2Y). The list is generally published in four segments in order to spread the inspection workload over the entire fiscal year. A portion of the first segment for fiscal year 1965 is shown in table I.[6] In addition, special lists are furnished as required. All items on the cyclic inspection lists are automatically approved for cyclic inspection during the fiscal year without further approval by the SPCC. The first and third columns in Table I give the stock numbers of the items to be inspected and the second and fourth columns show the Packaging Requirements Code (PRC). This code enables the stock point to determine the type of packaging to be performed on the items. The costs, involved in the inspections of items on SPCC's cyclic inspection list, are charged against local Operation and Maintenance funds.

Sampling Plan. Quantities of items on the cyclic inspection list to be selected for inspection are illustrated in Table II. The table is the Bureau of Supplies and Accounts' standard "frequency cycle and sampling quantities for inspection of preserved material in stock."[7]

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[6]Department of the Navy; Ships Parts Control Center, SPCC Cyclic Inspection List, Fiscal Year 1965, (SPCC Notice 4730, 1964), pp. 1-2.

[7]BUSANDA Instruction 4032.1A, op. cit., Enclosure (1), p. 1.

TABLE I

First Segment of Cyclic Inspection

List for Fiscal Year 1965

STOCK NUMBER	PRC
1H 28256592419	111136AAAAYFC000A-LQBM
1H 28256592420	111136AAAAYFC000A-LTBM
1H 28256592421	111136AAAAYFC000A-LVBN
1H 28256592422	111136AAAAYFC000A-LQBN
1H 28256592423	111136AAAAYFC000A-LRBN
1H 28256596570	DD150200XXYD3000A-DJAJ
2H 28256707644	111136AAAAYFC000A-PQCH
2H 28256707652	CJ1502AAAAYXX000A-BUAG
2H 28256707654	111136AAAAYFC000A-MRBF
2H 28256707655	111136AAAAYFC000A-MQBF
2H 28256707658	111136AAAAYFC000A-MLBE
2H 28256707659	111136AAAAYFC000A-MJBE
2H 28256707660	111136AAAAYFC000A-MGBD
2H 28256707662	CJ1502AAAAYXX000A-DJAH
1H 28256784341	CH1502AAAAYXX000A-EMAM
1H 28256785859	CJ1502AAAAYXX000A-DGAH
1H 28256787386	CJ1502AAAAYXX000A-DTAJ
2H 28256787389	DD151000XXYD3000A-DDAH
2H 28256787390	3Q1502AAAAYXX000A-FUAL

STOCK NUMBER	PRC
2H 28256787392	CJ1502AAAAYXX000A-DVAK
1H 28256787413	CJ1502AAAAYXX000A-CLAE
1H 28256787414	CJ1502AAAAYXX000A-CAAE
2H 28256787415	CH1502AAAAYXX000A-CLAG
2H 28256787416	CJ1502AAAAYXX000A-DBAH
2H 28256796046	111136AAAAYFC000A-NFCE
2H 28256796050	111136AAAAYFC000A-NNBX
2H 28256796054	111136AAAAYFC000A-PCCD
2H 28256796055	111136AAAAYFC000A-QACG
2H 28256796106	111136AAAAYFC000A-QECF
2H 28256796115	111136AAAAYMA000A-RGCN
2H 28256796116	111136AAAAYFC000A-MGBX
2H 28256799913	CH1502AAAAYXX000A-FDAX
2H 28256799914	111136AAAAYFC000A-JQBE
2H 28256799915	111136AAAAYFC000A-SFDS
2H 28256799916	111102AAAAYD3000A-CLAH
2H 28256799921	111136AAAAYFC000A-KFBR
2H 28256799922	111136AAAAYFC000A-MXBV
2H 28256799923	111136AAAAYFC000A-MVBV

TABLE II

Frequency Cycle and Sampling Quantities for Inspection of Preserved Material in Stock

Quantity On Hand	Open or Shed Storage 12 Month Cycle			*Warehouse Storage (Non C/H) 36 Month Cycle			Controlled Humidity Storage (C/H) 60 Month Cycle		
	Sample Size	AC**	Rej***	Sample Size	AC**	Rej***	Sample Size	AC**	Rej***
	A	B	C	A	B	C	A	B	C
2-8	3	0	1	2	0	1	2	0	1
9-15	5	0	1	3	0	1	2	0	1
16-25	7	0	1	5	0	1	3	0	1
26-40	10	0	3	5	0	3	3	0	1
41-65	15	0	3	7	0	3	5	0	1
66-110	25	1	4	10	0	3	5	0	3
111-180	35	1	5	15	1	4	7	0	3
181-300	50	2	7	25	2	5	10	1	4
301-500	75	4	9	35	2	7	15	1	5
501-800	100	5	12	50	3	10	25	3	7
801-1300	100	5	12	75	5	12	35	3	12
1301-3200	150	7	19	100	7	17	50	5	15
3201-8000	200	9	25	150	11	29	100	7	20

*Warehouse space as defined in BuSandA Manual, par. 27026-3b(2) is area in a building constructed with roof and complete side and end walls.

**Acceptance Quantity.

***Rejection Quantity.

The frequency cycle given is for reinspection of material on the cyclic list and for inspection of material in store that is not included on the inspection list furnished by SPCC. The first column in Table II represents the quantity on hand in an "inspection lot". Column A represents the sample size to be selected for the quantity on hand for each of the three types of storage locations indicated. Columns B and C will be demonstrated through an example that will be discussed in a later part of this section.

Procedure for using Table II.[8] If the number of deteriorated technical items found in the first sample (Column A) for a specific quantity on hand:

1. Equals or is less than the acceptance number shown in Column B, the material on hand will be considered acceptable and no further examination will be made.

2. Equals or exceeds the rejection number shown in Column C, the entire quantity on hand will be inspected.

3. Exceeds the number shown in Column B but is less than the number shown in Column C, the double sampling plan will be used and a second sample of twice the original sample quantity will be taken.

If the total number of deteriorated items found in both samples:

1. Is less than the number shown in Column C, the entire lot is acceptable and no further examination will be made.

2. Equals or exceeds the number shown in Column C, the entire quantity on hand will be inspected.

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[8] BUSANDA Instruction 4032.1A, op. cit., Enclosure (1), p. 2.

Example Number One. If the quantity of an item on hand in controlled humidity storage is 15 units, a sample size of 2 would be selected for inspection from the 15 units available. If no deterioration is found in the 2 units, all 15 units are designated acceptable and no further inspection of this item is made. Accordingly, preservation and packaging is replaced or renewed only on the 2 units. If 1 or both of the 2 units shows signs of deterioration, the remaining units in the inspection lot are then inspected.

Example Number Two. If the quantity on hand in warehouse storage is 1299 units, a sample size of 75 would be selected for inspection. After removal of the preservation and packaging from the 75 units, the inspection process would be as follows:

1. If 5 units (or less) are found deteriorated, all units represented by the sample are designated acceptable and no further examination is made. Preservation and packaging is replaced or renewed on the 75 units.

2. If 12 units are found deteriorated, the entire quantity represented by the sample will be inspected.

3. If 7 units (or any quantity from 6 through 11) are found deteriorated, an additional 150 units (i.e. twice the original sample quantity) are inspected. If 4 of the 150 units (a total of 11 rejects from both samples - 225 units representing 1299 units) are determined to be deteriorated, all material on hand represented by the sample is designated acceptable. Preservation and packaging is replaced or renewed on the 225 units. If 5 (rather than 4, as discussed above) of the 150 units are determined to be deteriorated (a total of 12 rejects from both samples), the remaining units in the inspection lot will be inspected.

Disposition of Material After Inspection. Material that is discovered during the cyclic inspection to need packaging or preservation is first checked to see if the material is ready-for-issue. Items that are ready-for-issue are preserved and packaged according to the packaging requirements code (PRC) that is included in the SPCC Cyclic Inspection List.[9] Whenever the inspection is determined to be acceptable, only the sampling units are reprocessed. It is contrary to SPCC policy to reprocess the entire lot, in this case, in order to merely bring the packages up to current packaging requirements.

Items that are not ready-for-issue are disposed of locally or reported to the SPCC as current regulations dictate.

Reports. Activities are required to notify the Ships Parts Control Center of the actual completion date for each segment of the Cyclic Inspection List.

Material in Store Not on Cyclic Inspection Lists. Items in store which are found to be in need of packaging or preservation but are not on the SPCC Cyclic Inspection List require submission of NAVSANDA Form 483, "Packaging/Preservation Recommendation" to the SPCC for approval prior to preservation action. Preservation and packaging, for this category of material, is charged to the Navy Stock Fund/SPCC Allotment.

Additional Requirements. In addition to the procedures discussed above, the SPCC requirements include repetition of five (items 3, 4, 7, 8, 9 and 11) of the Bureau of Supplies and Accounts' general guidelines for care and preservation of stocks.[10]

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[9] Supra, p. 19.

[10] Infra, p. 72.

IV. FLEET MATERIAL SUPPORT OFFICE[11]

The Fleet Material Support Office (FMSO) controls the inspection and preservation program for most types of material that are under the Defense Supply Agency for wholesale management but under the Navy for retail management. The categories of material under FMSO's control are automotive, construction, electronic, general, industrial, medical, and packaged petroleum and chemical supply items. The cognizance symbols for these categories of material are 9A, 9C, 9N, 9G, KZ, 9L, and 9W, respectively. The FMSO provides procedures for the cyclic inspection and preservation of its material and procedures for handling material (deteriorative) that is subject to shelf life limitations. Only the procedures for deteriorative material will be discussed.

Listing of Deteriorative Items. The FMSO furnishes applicable stocking activities with a listing of deteriorative items for the categories of material referred to above.[12] This listing identifies two distinct categories of deteriorative material for which the processing procedures are slightly different. These categories are (1) general deteriorative items and (2) mandatory shelf life items. A coding system is used in the listing to indicate the safe storage period for each item.

Inspection Procedure for General Deteriorative Items. Upon the expiration of the designated safe storage period for general deteriorative items, a visual examination is conducted of each item to determine

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[11]Department of the Navy: Fleet Material Support Office, Deteriorative Material, (FMSO Instruction 4450.2, 1963), pp. 1-4.

[12]Ibid, Enclosure (1).

if the material is in a ready-for-issue condition. This inspection includes a review of the material's condition and the adequacy of its markings. For example, paint containers should be airtight and gummed or pressure sensitive tapes must retain their adhesiveness. Items that are determined to be in a ready-for-issue condition will have:

1. Their safe storage period extended by one-half of the original safe storage period.

2. A tag, label, or stencil affixed to the container to show the current and future examination dates.

The above inspection procedure may be repeated as long as the material is still definitely in a ready-for-issue condition. That is, the extension of the safe storage period by one-half of the original safe storage period could conceivably be continued indefinitely. However, the cost of the inspection versus the value of the stock, and the expectancy of its use, should be considered when extending the safe storage period more than once.

Material that is not-ready-for-issue, at one of the inspections discussed above, is removed from stock and surveyed.

Inspection Procedure for Mandatory Shelf Life Items. Upon the expiration of the safe storage period for mandatory shelf life items, survey action is automatically taken without further examination of the material. In addition, when mandatory shelf life items are found unpacked, or without the manufacture date on the package, they also will be surveyed.

Reports. In order to keep the FMSO informed as to the accuracy of the assigned safe storage periods, activities are requested to furnish

FMSO with information on general deteriorative items that (1) consistently outlive their designated shelf life or (2) do not remain in a ready-for-issue status for the specified period of time. No reporting system is specified for mandatory shelf life items.

V. ORDNANCE SUPPLY OFFICE

The procedures prescribed by the Ordnance Supply Office will be discussed separately for the (1) cyclic inspection and preservation of material and (2) handling of deteriorative material.

Cyclic Inspection and Preservation Program[13]

Priority System. The Ordnance Supply Office (OSO) prescribes five priorities to be used in determining what specific items of ordnance material (cognizance symbols A and Z) are to be inspected and preserved. However, it is noted that the implementation of the complete inspection and preservation program is dependent upon the availability of manpower, money, and materials. Accordingly, the order of priority for the stocking activities to use are:

1. First, inspection is to be made of items consigned to active fleet vessels and bin loading programs. Whenever the quantity of deteriorative samples meets the criterion previously discussed under the procedure for using Table II,[14] the entire quantity of this material may be represerved.

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[13]Department of the Navy: Ordnance Supply Office, Cyclic Inspection and Preservation of OSO Controlled Material in Storage, (OSO Instruction 4030.24C, 1959), pp. 1-5.

[14]Supra, pp. 21-24.

2. Second, the items on OSO's Preferential Listing are to be inspected.[15] This listing is updated through periodic revisions to the initial listing provided. Whenever the quantity of deteriorated samples meets the prescribed criterion, the entire quantity of this material may be preserved.[16]

3. Third, "critical" ordnance material is to be inspected. Critical items are designated in the Navy Stock List by means of an asterisk (*) which precedes the cognizance symbol.[17] Whenever the quantity of deteriorated samples meets the prescribed criterion,[18] only 10% of the quantity on hand may be represerved without approval by the OSO. If the local activity determines that some additional quantities, beyond the 10% should also be preserved, approval is obtained by submitting NAVSANDA Form 483 to OSO. The remaining quantities are to be given a limited protection corresponding to the type of storage to prevent any further deterioration.

4. Fourth, inspection is to be conducted on "all other" ordnance material. Whenever the quantity of deteriorated samples meets the prescribed criterion,[19] the quantity of each line item must be reported to the OSO through submission of NAVSANDA Form 483. No preservation or packaging may be commenced until the approved forms are returned to the activity.

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[15] OSO Instruction 4030.24C, op. cit., Enclosure (2).

[16] Supra, pp. 21-24.

[17] Navy Stock List of the Ordnance Supply Office, Volume 4, Preservation and Packaging Data Section.

[18] Supra, pp. 21-24.

[19] Ibid.

Additional Requirements. In addition to the procedures discussed above, the OSO requirements include repetition of seven (items 3, 4, 6, 7, 8, 9, and 10) of the Bureau of Supplies and Accounts' general guidelines for care and preservation of stocks.[20]

Deteriorative Material Program[21]

In addition to ordnance material being included in the cyclic inspection and preservation program, certain items tend to deteriorate in storage more rapidly than others. These items are assigned a "safe storage period" for guidance as to the approximate period of time an item may retain, from time of manufacture, its full functional capability under normal storage conditions. Since many items will still be in a ready-for-issue state after the designated shelf life has been reached, value judgment must be exercised in ensuring that good material is not arbitrarily disposed of.

Inspection Procedure. The OSO furnishes designated activities with a listing of OSO deteriorative material.[22] This listing contains the stock number and the shelf life for each line item of material. The inspections conducted by the individual activity are accomplished as initial and subsequent inspections.

The initial inspection encompasses a sampling inspection of all stocks on hand of the stock numbers in the OSO listing. When the inspection sampling shows that material is in a ready-for-issue condition, two separate actions are taken:

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[20] Infra, p. 72.

[21] Department of the Navy: Ordnance Supply Office, OSO Deteriorative Material, (OSO Field Instruction 4400.13A, 1960) pp. 1-3.

[22] OSO Field Instruction 4400.13A, op. cit., Enclosure (1).

1. The safe storage period, indicated on the OSO listing, is extended by one-half of the original safe storage period. For example, if a specific stock number of material had been given a safe storage period of six months originally and was found to be in good condition, the safe storage period would be extended by three additional months. This would give the item in question a total of nine months shelf life.

2. A tag or label is attached to the material. This document is then completed to show the current inspection date and the date that the next inspection is due. Material that is determined to be not in a ready-for-issue condition is surveyed.

Subsequent inspections are conducted in conjunction with the regular cyclic inspection and preservation program for ordnance material.[23] If this inspection reveals that the material is still in a ready-for-issue condition, the safe storage period is extended a second time by one-half of the original safe storage period. For example, an item with an original safe storage period of six months; that was extended an additional three months in the first inspection, would now be extended an additional three months for a total of twelve months. The tag or label should now be marked to indicate the disposal date, i. e., the final expiration date for the item's shelf life. When the disposal date arrives, the material is surveyed as unfit for issue.

VI. ELECTRONICS SUPPLY OFFICE[24]

The cyclic inspection and preservation program of the Electronics

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[23] Supra, p. 28.

[24] Department of the Navy: Electronics Supply Office, Cognizance Symbol "N" Preservation and Packaging Program, (ESO Instruction 4032.1B, 1961), pp. 1-4.

Supply Office (ESO) has five basic objectives. These are: (1) to insure inspection and represervation of electronics material on a scheduled basis, (2) to limit inspections and represervation to items which will be retained in the Navy Supply System, (3) to keep stocks in a ready-for-issue condition, (4) to provide a tool for aiding in the purification of stocks and (5) to make best use of available funds.

Inspection Plan. The items of electronic assemblies and repair parts (cognizance symbol N) that are approved by the ESO for cyclic inspection and preservation are: (1) the ready-for-issue items that are listed in the current ESO Critical Item List, (2) items that are included in Enclosure (1) to certain ESO instructions,[25,26] and (3) items in store for which retention levels have been established by the ESO. Preservation is limited to only those quantities within the prescribed retention limits.

Material which requires preservation and packaging, but is not included in one of the three categories, referred to in the previous paragraph, must be reported to the ESO on NAVSANDA Form 483. The ESO will advise the stocking activity on quantities to be preserved and packaged and the methods to be employed. Small quantities of inexpensive material should not be reported when the preservation would be uneconomical or when the material will be consumed in the near future.

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[25]Department of the Navy: Electronics Supply Office, Cognizance Symbol "IN" Material Returned to Store, (ESO Instruction 4440.67G, 1963).

[26]Department of the Navy: Electronics Supply Office, Repairable "N" Cognizance Material, (ESO Instruction 4440.38H, 1964).

Sampling Plan. The procedures for determining the quantity to be selected for inspection and the amount to be preserved are identical to those previously discussed under the Ships Parts Control Center.[27]

Funding. Expenses resulting from inspection and preservation of material included in the three priority categories are chargeable to Operation and Maintenance Funds whereas expenses for items reported to ESO on NAVSANDA Form 483 are chargeable to the Navy Stock Fund allotment furnished the activity by the ESO.

Additional Requirements. In addition to the procedures discussed above, the ESO requirements include repetition of two (items 3 and 4) of the Bureau of Supplies and Accounts' general guidelines for care and preservation of stocks.[28]

VII. AVIATION SUPPLY OFFICE[29]

The procedures in effect for aeronautical material will be discussed separately for the (1) cyclic inspection and preservation program and the (2) storage time limitation program.

Cyclic Inspection and Preservation Program

The Aviation Supply Office (ASO) requires that aeronautical (cognizance symbol R) and photographic material (cognizance symbol E) receive a visual cyclic inspection dependent upon whether or not the

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[27] Supra, pp. 21-24.

[28] Infra, p. 72.

[29] Department of the Navy: Aviation Supply Office, Cyclic Inspection and Preservation, (ASO Field Instruction 4030.1A, 1957), pp. 1-3.

material is packaged and preserved and then within a designated priority system.

Inspection Policy. All items of unpreserved and unpackaged material are inspected to determine the condition of the material. Items that are in a ready-for-issue status are to be packaged and preserved and placed on the shelf for issue. Material that is not ready-for-issue is reported to the ASO according to current regulations.

When the material is preserved and packaged, a minimum of 1% of the items are inspected on a random basis according to the following schedule:

Preservation Method	Number of Months After Indicated Preservation Date
I and III	48
IA, IB, IC	36
II	30

Exceptions to the general inspection policy above are as follows:

1. All material that is found in a deteriorated, damaged or opened package will be inspected.

2. Material in uncovered storage is inspected at intervals 12 months earlier than the number of months prescribed in the schedule above.

3. Whenever the inspection reveals that there is evidence of deterioration of preservation and packaging or corrosion of the item, a 10% sample is taken. If over 25% of this sample reveals deterioration or corrosion, then inspection is performed on 100% of the item. For example, if 200 units of an item are on hand, a sample inspection would be performed on 20 units. If 6 of the 20 units show signs of deterioration, the remainder of the 200 units would then be inspected.

4. Items which have a predetermined shelf life are excluded from the cyclic inspection and preservation program and are processed under

different procedures. These procedures will be discussed in a later section of this chapter.

Inspection Priority. In order to ensure that the more important items receive attention first, specific guidelines have been established by the ASO to eliminate any guesswork on the part of the individual activities as to what items should be inspected first. The priority, in the order listed, is required by the ASO:

1. The items on the Master Repair List are given priority over all other items in the ASO Supply System.[30] Items which have been overhauled shall be preserved and packaged, if required. Items that are awaiting scheduling and transfer to an overhaul point are to be protected to prevent deterioration. The items will receive the regular preservation and packaging after their overhaul has been completed.

2. The second priority is to be given to all unpreserved and unpackaged material which has been found to be in a ready-for-issue condition.

3. Even though not specifically indicated, it is implied that the third priority would be given to the preserved and packaged material in store that is not inspected under the first priority. This is in consonance with the inspection policy reiterated on the previous page.

Use of NAVSANDA Form 483. Whenever the activity is in doubt as to the preservation method to be applied to an item or when a standard preservation and packaging instruction for an item is not held, NAVSANDA

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[30]Department of the Navy: Aviation Supply Office, Master Repair List, (ASO Field Instruction 4710.12C, 1958).

Form 483 is forwarded by the activity to ASO in order to obtain the applicable preservation and packaging instructions.

Storage Time Limitations Program

Aviation material that has a predetermined shelf life is listed in a publication containing "Ready For Issue Storage Time Limitations and Processing Codes."[31] This publication, which is generally published quarterly, contains (1) a list of all active items of supply (aviation) that are assigned storage time limitations and processing codes, (2) a list of the stock numbers that have been dropped from inventory control and others that no longer have a storage time limitation and (3) a list of stock number changes and transfers to other inventory control points that have been generated since the issuance of the previous publication.

The stocking activities must establish local operating procedures that will ensure that aeronautical material is processed according to the storage time limitation and processing codes that are assigned for each item of material carried in stock. The coding system that is used to indicate the shelf life for item of supply is illustrated in Table III. The digits (e.g., 1, 2) are used to represent years of shelf life whereas letters (e.g., A, B) indicate months of shelf life.

The processing code, which is used in conjunction with the storage time limitation, is used to advise the activity as to the specific action to be taken for an item that has reached the expiration of the storage time limitation. The current processing codes in effect are shown in Table IV. The action required, for each given code, is noted in the explanation column.

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[31]Department of the Navy: Aviation Supply Office, RFI Storage Time Limitations and Processing Codes, (Navy Stock of the ASO, Section C0015), pp. 1-90.

TABLE III

Storage Time Limitation

(Shelf Life) Codes

for Aeronautical Material

Storage Time Limitation

(Shelf Life) Codes

Code	Shelf Life
0 -	Nondeteriorative
A -	1 Month
B -	2 Months
C -	3 Months (1 Quarter)
D -	4 Months
E -	6 Months (2 Quarters)
F -	9 Months (3 Quarters)
I -	1 Year (4 Quarters)
G -	15 Months (5 Quarters)
H -	18 Months (6 Quarters)
J -	21 Months (7 Quarters)
2 -	2 Years (8 Quarters)
K -	27 Months (9 Quarters)
L -	30 Months (10 Quarters)
M -	33 Months (11 Quarters)
3 -	3 Years (12 Quarters)
N -	39 Months (13 Quarters)
P -	42 Months (14 Quarters)
4 -	4 Years (16 Quarters)
Q -	54 Months (18 Quarters)
5 -	5 Years (20 Quarters)
R -	66 Months (22 Quarters)
6 -	6 Years (24 Quarters)
7 -	7 Years (28 Quarters)
8 -	8 Years (32 Quarters)

TABLE IV

Processing Codes for Aeronautical Material

Processing Codes

CODE	EXPLANATION
CT	Incorporate all mandatory changes, perform minor adjustments required, clean and relubricate bearings, reassemble, test to post overhaul standards and correct any observed discrepancies. Items which pass tests shall be returned to stock as RFI. Exterior package marking of such items shall indicate the latest check and test date and the original date of manufacture. Items which fail test shall be placed in "RB" category.
L-	To be tested by the Laboratory in increments after the initial time limit has expired. The letter or number following the "L" indicates the increment in which laboratory tests are required.
	EXAMPLE: ILC - After 12 months, and every three months thereafter a sample should be submitted to the Laboratory for testing.
RD	Replace all deteriorated and nonmetalic components subject to deterioration (disassemble and process to the level required to permit replacement of deteriorable items; test to post overhaul standards and return to stock as RFI item with fully restored storage time limitations). Exterior package marking of such items shall indicate the latest date of overhaul. REPLACES "PROCESSING CODE" "0".
RN	Provides for equipment that has been tested with fluids indicated by Specification MIL-F-7024A and has not subsequently been operated with other fluids. (Use for fuel metering equipment only.) REPLACES PROCESSING CODE "0-N3".
RJ	This is assigned to fuel metering equipment which has been tested by other than MIL-F-7024A.
UU	Unsuitable for restoration to issuable status. REPLACES PROCESSING CODE "U".
T-	Test, if OK, extend life by the time represented by the letter or number code following "T", after which process in accordance with code "RD".
C-	Incorporate all mandatory changes etc.; if found satisfactory, reclasify to the number of months indicated after the "C", after which it is considered unsuitable for restoration to issuable status. REPLACES PROCESSING CODE "CT-OK-RCL-24-U".

VIII. SUMMARY OF INVENTORY CONTROL POINTS PROCEDURES

The procedures reviewed in Sections III through VII are summarized in Tables V and VI in such a manner that the common elements among the various procedures may easily be detected. Table V is a summary of the cyclic inspection and preservation procedures of the SPCC, OSO, ESO, and ASO. Table VI is a summary of the deteriorative material procedures of the FMSO, OSO, and ASO.

TABLE V

SUMMARY OF CYCLIC INSPECTION AND PRESERVATION PROCEDURES OF SPCC, OSO, ESO, AND ASO

ICP	INSPECTION PRIORITY SYSTEM	BASIS FOR DETERMINING SAMPLE QUANTITY	BASIS FOR DETERMINING QUANTITY TO BE PRESERVED	SOURCE OF FUNDS	REPORTS
SPCC	1. Items on cyclic inspection lists.	Table II	Table II	O&M	Report of Completion
	2. Specific instructions are not issued for "other material"	Table II	SPCC action on NAVSANDA 483	NSF	None
OSO	1. Items for active fleet vessels and bin loading programs	Table II	Table II	O&M when within limitations of Table II	None
	2. Items on preferential listings.	Table II	Table II		
	3. Critical Items.	Table II	10% of Quantity on Hand		
	4. "All other" material.	Table II	OSO action on NAVSANDA 483		
ESO	1. Items on critical item list	Table II	Table II	O&M	None
	2. Items on ESO Listings.	Table II	Table II	O&M	None
	3. Items for which retention limits have been established.	Table II	Table II	O&M	None
	4. Same as for item two under SPCC.	Table II	ESO action on NAVSANDA 483	NSF	None
ASO	1. Items on master repair list:				
	a. Overhauled	100%	100%	Not included	None
	b. Awaiting overhaul	Not applicable	Minor protection only		

ICP	INSPECTION PRIORITY SYSTEM	BASIS FOR DETERMINING SAMPLE QUANTITY	BASIS FOR DETERMINING QUANTITY TO BE PRESERVED	SOURCE OF FUNDS	REPORTS
ASO (Cont.)	2. All unpreserved/unpackaged material.	100%	100%	Not included	None
	3. Preserved/packaged material.	Random sample of at least 1%	As Required		

TABLE VI

SUMMARY OF DETERIORATIVE

MATERIAL PROCEDURES OF

FMSO, OSO, AND ASO

ICP	MEANS OF DISSEMINATING DETERIORATIVE ITEMS	BASIC PROCEDURES*	REPORTS
FMSO	Listing of deteriorative items:		
	1. General deteriorative items.	1. If RFI at first inspection, shelf life is extended by one-half of original life. 2. Repeat step one on successive inspections as long as the material is RFI.	Report required on items greatly over/under prescribed shelf life.
	2. Mandatory shelf life items.	Survey upon expiration of shelf life	None
OSO	Listing of deteriorative items.	1. If RFI at first inspection, shelf life is extended by one-half of original life. 2. If RFI at second inspection, shelf life is again extended by one-half of original life. 3. Material is surveyed when two times the original life is reached.	None
ASO	Navy Stock List of the Aviation Supply Office Section C0015.	At expiration of shelf life, action is required to be taken in accordance with the applicable processing codes.	

*"RFI" as used herein means "Ready-for-Issue".

CHAPTER IV

THE STUDY: PART B

I. RESEARCH METHOD

In order to determine the effectiveness of the procedures that were reviewed in Chapter III, a copy of local operating instructions which implemented the cyclic inspection and preservation program were requested from ten major Navy stocking activities. The letter request, which was addressed to the personal attention of the activity's Storage Officer, specifically requested instructions for all of the categories of material discussed in Chapter III. The activities selected for this review included (1) four Naval Supply Centers, (2) two Naval Supply Depots, and (3) four Naval Shipyards. A sample of the letter that was forwarded to these activities is shown in Appendix B.

II. RESULTS OF THE STUDY

The correspondence that was received in response to the request for local operating procedures is briefly summarized in Appendix E. From the limited survey that was conducted, it is concluded that most major activities do not have a well-organized cyclic inspection and preservation program in effect. Only two out of ten activities (20%) queried had a plan in effect for the inspection program. Three activities' inspections were primarily limited to items on cyclic inspection lists furnished by the Inventory Control Points. Two activities were not performing inspections for any type of material. Two activities did not respond; this is presumed to mean that a good program is not in effect. Only one activity was trying to comply with the intent of all published instructions.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

It is to be noted that the conclusions and recommendations are based on this limited study of a broad and fairly complex area of inventory management. The opinions expressed herein are strictly those of the writer and have no official sanction.

I. CONCLUSIONS

Based on the results of the survey conducted, it is apparent that stocking activities, as a general rule, do not have a complete and effective program established for the cyclic inspection and preservation of material in store. It appears, from the information obtained during the course of the study, that where the activity is performing some type of inspection, it is very probable that the material on SPCC's cyclic inspection list will be included. The reason for this is attributed to the simple but effective system employed by the SPCC. That is, the SPCC furnishes the activity with a specific listing of items to be inspected during a specific quarter of the fiscal year. When the inspection is completed, the activity is required to notify the SPCC.

A major problem area is in the interpretation by the stocking activities as to "what" inspections are actually required. Some of the contributing factors to the problem are due to the conflict among the various directives issued at all levels. Some of these are:

1. A Secretary of the Navy directive requires that "all" items in store be regularly inspected to determine the state of packaging, etc.

2. The Bureau of Supplies and Accounts Manual, in its general policy for inspection and cyclic preservation, states that preservative packaging applied to material usually matures to a state requiring reconditioning in cycles of three years plus or minus depending upon certain conditions.

3. A Bureau of Supplies and Accounts directive makes the assumption "that materials placed into the supply system commercially packaged, or packaged only for physical protection, have been reviewed by the Inventory Control Points and the determination made that the materials are not subject to corrosion or other physical deterioration." This statement appears to be in direct conflict with item two above. In addition, this same directive requires only the cyclic inspection of material that is designated for retention on Inventory Control Point listings or annotation on NAVSANDA Form 483. The policy on the bulk of the material, items not on Inventory Control Point listings, is not clearly defined in order to agree with item one above.

4. Inventory Control Point directives enclose, or provide otherwise, a listing of items that are to receive a cyclic inspection and they generally specify an overall priority system for determining the inspection plan for the material under their control. However, the listings and inspection priorities do not always include "all material in store" under their cognizance. Of the directives reviewed, only ESO and OSO included all of their material in the inspection plan. In summation of this problem, the local activity is left with the difficult task of trying to decipher all of these directives in order to establish an effective inspection plan that will meet the requirements imposed at the various levels.

There is no evidence of an effective feedback and control system on the inspection and preservation program. Neither the Bureau of Supplies and Accounts nor the Inventory Control Points require sufficient feedback information to be fully informed on the total effort involved in this program. Only one Inventory Control Point even requires a report of completion for the items on the cyclic listings. The Bureau of Supplies and Accounts' work measurement reporting system does not include the line items inspected or the manhours expended in this program. Therefore, it seems that the necessary information is lacking in order for the Bureau and/or the Inventory Control Points to determine the effectiveness of the program on a continuing basis and the costs involved.

Most of the Inventory Control Points included, in their directives to stocking activities, several of the general guidelines published by the Bureau of Supplies and Accounts for the care and preservation of material in stock; even though the pertinent directive was referenced. The wording of the guidelines had been slightly altered, in some instances, but generally stated the same thought. As a result, this created another problem for the stocking activity in trying to determine what had been revised, if anything.

The source of funds for the complete inspection program was not clearly defined. The Bureau of Supplies and Accounts' policy authorizes the use of Operation and Maintenance funds for cyclic inspection and preservation of stocks within the Bureau's prescribed frequency cycle and specific sampling system. The area of confusion is with the priority listings prescribed by the Inventory Control Points. Unless specified, which is not always the case, the stock point has no way

of knowing whether or not the items on the listing are within the frequency cycle (e.g., 36 month cycle for warehouse storage).

In some cases, the Inventory Control Points specified their own criteria instead of using the Bureau's standard policy for determining sample quantities for inspection and the quantity to be represerved. There was no evidence to indicate that this procedure had been concurred in by the Bureau of Supplies and Accounts.

The Inventory Control Point procedures, that were reviewed, for deteriorative material do not appear to be in conflict with any higher order directives. As a general rule, these procedures were clearly defined and should not impose any problem on the stock point in determining the action required. One area that should possibly be explored for standardization purposes is in the manner in which shelf life, for general deteriorative items, is extended. The Ordnance Supply Office requires that material be surveyed at the expiration of the second shelf life extension of one-half of the original life. That is, a deteriorative ordnance item could have a maximum life of twice the original life. The Fleet Material Support Office procedures specify that the shelf life may be extended by one-half of the original life indefinitely providing the items remain in a ready-for-issue condition. One system might work just as well for both inventory managers and would assist in simplifying the problem at the stocking activity.

As a concluding opinion, it is felt that sufficient funds and personnel are not being provided for the purpose of properly inspecting and maintaining expensive material in store. The current emphasis seems to be on expensive computerized paper work systems; with little time and effort being devoted to the needs of the actual material itself.

II. RECOMMENDATIONS

In order to simplify the cyclic inspection and preservation program to the maximum extent, the recommendations in the succeeding paragraphs are offered for consideration at the levels of authority indicated.

Bureau of Supplies and Accounts. It is recommended that the Bureau of Supplies and Accounts conduct a study of the existing procedures that are published by the Secretary of the Navy, the Bureau of Supplies and Accounts, and others as may be appropriate for the purposes of:

1. Providing the necessary funds in order for the stocking activities to be able to perform the required inspections and preservations of all categories of material in store. If sufficient funds cannot be obtained for this purpose, it is suggested that a priority system be developed by the Bureau in conjunction with the various inventory managers. This system should provide first for inspection and preservation of the most important needs (high value items, items having specific shelf life assigned, etc.) of each different cognizance of material. This method would at least prevent one or a few types of material from receiving most, if not all, of the stocking activity's time and effort that is being devoted to this program.

2. Refining and combining existing policies and guidelines into a new section, appropriately titled, in the Bureau of Supplies and Accounts Manual, Volume II.

3. Requiring Inventory Control Points to promulgate directives for material under their cognizance that (1) references the BUSANDA Manual (assuming item two above is implemented) and (2) provides only supple-

mental information that is peculiar to their category of material, including priorities and cyclic listings.

4. Clearly delineating, within known funding and manpower shortages, the action to be taken by the stocking activities for material in store that is not included on Inventory Control Point listings.

5. Defining the areas to be financed by Operation and Maintenance funds and those to be financed by the Navy Stock Fund.

6. Determining the feasibility of standardizing procedures for the extension of shelf life for deteriorative items.

7. Developing a feedback and control system that will assist in evaluating the effectiveness of the prescribed program, the costs involved and the shortcomings of the program.

Inventory Control Points should:

1. Review their existing directives for purposes of updating in consonance with the Bureau of Supplies and Accounts' policies and procedures.

2. Establish a system to periodically update "standing" listings of items to receive preferential treatment in the inspection program.

Stocking Activities should:

1. Obtain and review directives applicable to each category of material carried in store.

2. Develop a plan that will ensure that the required actions are taken for each category of material. In this connection, it may be desirable, especially when several storage sections are involved in the inspection program, to prepare a local instruction (or memorandum) for each type of material which (1) contains the applicable Inventory

Control Point directives as an enclosure and (2) references any other pertinent directives.

3. Give special attention to the material that is "not" included on the various listings. Activities that have not been regularly inspecting this material may need to schedule a wall-to-wall inspection for the initial review. Subsequent inspections could then be in accordance with the frequency schedule published by the Bureau of Supplies and Accounts.

Inspecting Officers, in their inspections of the stocking activities, should verify that the activity has prepared an effective plan for accomplishing the required inspections and preservations on each category of material carried in stock.

BIBLIOGRAPHY

A. BOOKS

Alford, L.P. and John R. Bangs. Production Handbook. The Ronald Press Company, 1947.

Greathouse, Glenn A. and Carl J. Wessel. Deterioration of Materials. Reinhold Publishing Company, 1954.

Melnitsky, Benjamin. Management of Industrial Inventory. Conover-Mast Publications, Inc., 1953.

Whitin, Thomson M. The Theory of Inventory Management. Princeton University Press, 1953.

B. GOVERNMENT PUBLICATIONS

Department of the Navy, Aviation Supply Office, Navy Stock List of the Aviation Supply Office.

Department of the Navy, Bureau of Supplies and Accounts. Management Handbook, NAVSANDA Publication 285.

Department of the Navy, Bureau of Supplies and Accounts. Bureau of Supplies and Accounts Manual, Supply Ashore, Volume II.

Department of the Navy, Bureau of Supplies and Accounts. Storage and Materials Handling Handbook, NAVSANDA Publication 284.

Department of the Navy, Office of Naval Material. Navy Policy and Standards for Inventory Management, NAVEXOS Publication 1500.

Department of the Navy, Ordnance Supply Office. Navy Stock List of the Ordnance Supply Office.

C. UNPUBLISHED MATERIALS AND LETTERS

Kirch, Frederick J. Personal Letter to E.G. Brown, January 22, 1965.

Lapidus, Herbert M. Personal Letter to E.G. Brown, January 21, 1965.

Walsh, Robert J., "Storage of Technical Material." Unpublished term paper, U.S. Naval Postgraduate School, Monterey, California, 1957.

D. DEPARTMENT OF THE NAVY INSTRUCTIONS

Aviation Supply Office. Cyclic Inspection and Preservation. ASO Field Instruction 4030.1A, 1957.

Aviation Supply Office. Master Repair List. ASO Field Instruction 4710.12C, 1958.

Bureau of Supplies and Accounts. Care and Preservation of Stock. BUSANDA Instruction 4032.3A, 1964.

Electronics Supply Office. Cognizance Symbol "N" Preservation and Packaging Program. ESO Instruction 4032.1B, 1961.

Electronics Supply Office. Cognizance Symbol "1N" Material Returned to Store. ESO Instruction 4440.67G, 1963.

Electronics Supply Office. Repairable "N" Cognizance Material. ESO Instruction 4440.38H, 1964.

Fleet Material Support Office. Deteriorative Material. FMSO Instruction 4450.2, 1963.

Ordnance Supply Office. Cyclic Inspection and Preservation of OSO Controlled Material in Storage. OSO Instruction 4030.24C, 1959.

Ordnance Supply Office. OSO Deteriorative Material. OSO Instruction 4400.13A, 1960.

Secretary of the Navy. Packaging Responsibilities Within The Naval Establishment. SECNAV Instruction 4030.2, 1954.

Ships Parts Control Center. Cyclic Inspection of "H" and "2Y" Cognizance Material in Store. SPCC Instruction 4730.5D, 1964.

Ships Parts Control Center. SPCC Cyclic Inspection List, Fiscal Year 1965. SPCC Notice 4730, 1964.

APPENDIX A

Number of Line Items and Corresponding Dollar Values of Navy Owned Material In Store As of December 31, 1964

Cognizance symbol	Cognizant supply demand control point, bureau, office, or agency	Definition	Line Items	Dollar Value
01	Naval Supply Depot Philadelphia	Publications	186,696	*
0T	Commandant of the Marine Corps	Expendable ordnance	830	*
0X	Commander Military Sea Transportation Service	Military Sea Transportation Service special material	2,241	*
1A	Navy Ordnance Supply Office	Ordnance repair parts	12,017	$ 63,869,492
1B	Bureau of Supplies and Accounts	Excess material and materials handling and dehumidifying equipment	*	12,252,716
1E	Navy Aviation Supply Office	Photographic material	3,200	5,247,368
1H	Navy Ships Parts Control Center	Ship assemblies and repair parts, submarine equipments and repair parts, and nuclear equipments and repair parts	122,282	248,301,890
1I	Naval Supply Depot, Philadelphia	Forms	10,316	8,124,960
1N	Navy Electronics Supply office	Electronic assemblies and repair parts	108,909	126,297,590
1Q	Navy Ship's Store Office	Ship's store and commissary store material	*	32,965,247

* Figures are not included in the reporting system

Cognizance symbol	Cognizant supply demand control point, bureau, office, or agency	Definition	Line items	Dollar value
1W	Navy Fuel Supply Office	Liquid and solid fuels and bulk lubricating oil and petroleum solvents	112	$131,872,943
2A	Navy Ordnance Supply Office	Ordnance material	84,568	717,575,260
2B	Bureau of Supplies and Accounts	Excess material and materials handling and dehumidifying equipment	*	13,691.104
2C	Bureau of Yards and Docks	Major construction and civil engineering equipment	1,734	113,126,265
2F	Bureau of Ships	Major electronic equipment	5,535	363,035,322
2H	Navy Ships Parts Control Center	Ship and submarine assemblies and repair parts	54,079	104,303,034
2J	Bureau of Naval Weapons	Major ordnance equipment	1,965	1,154,917,155
2K	Bureau of Naval Personnel	Library books	*	607,923
2N	Navy Electronics Supply Office	Electronics items pending transfer from the Bureau of Ships	30,830	29,820,790
2O	Navy Training Device Center	Training devices	2,426	35,344,521
2R	Navy Aviation Supply Office	Aeronautical material	402,633	2,240,413,508

*Figures are not included in the reporting system

Cognizance symbol	Cognizant supply demand control point, bureau, office, or agency	Definition	Line Items	Dollar Value
2S	Bureau of Ships	Major shipboard machinery, equipments and components	9,585	$ 375,783,417
2T	Navy Ordnance Supply Office	Expendable ordnance	10,152	1,823,618,187
2V	Bureau of Naval Weapons	Major aeronautical equipment	1,237	759,244,192
2Y	Navy Ships Parts Control Center	Construction equipment and repair parts (non-single manager repair parts and components to support Bureau of Yards and Docks programs)	5,448	2,869,255
4L	Navy Production Equipment Control Office	Items of industrial production equip- reserves (IPER)	*	3,034,015
4N	Navy Electronics Supply Office	Electronics repair parts to support Bureau of Naval Weapons systems, equipments, and components	6,630	12,159,697
4T	Bureau of Naval Weapons	Expendable ordnance	2,565	1,086,670,516
6A	Navy Ordnance Supply Office	Fleet ballistic missile related ordnance equipments	21,022	20,600,395
6F	Special Projects Office	Electronic items	72	2,105,159
6H	Navy Ships Parts Control Center	Repairable items for Special Projects Office Fleet Ballistic Missile navigation equipments	3,872	45,821,984

*Figures are not included in the reporting system

Cognizance symbol	Cognizant supply demand control point, bureau, office or agency	Definition	Line Items	Dollar Value
6J	Special Projects Office	Special Projects Office Ordnance Items	7,430	$151,122,262
6N	Navy Electronics Supply Office	Fleet ballistic missile related navigational aids and electronic equipment	900	2,557,230
6S	Special Projects Office	Special Projects Office ships hull, mechanical and electrical items	1,108	26,910,411
8A	Navy Ordnance Supply Office	Navy Nuclear ordnance	4,709	*
8N	Navy Electronics Supply Office	Training Devices repair parts	8,462	2,801,031
8S	Bureau of Ships	Ships equipment held in special accounting class 219	**	**
9A	Navy Fleet Material Support Office	Retail Defense Automative Supply Center Items	3,871	2,043,715
9C	Navy Fleet Material Support Office	Retail Defense Construction Supply Center Items	98,050	37,430,165
9D	Navy Clothing and Textile Office	Special occupational and environmental clothing and textiles	4,087	13,228,709
9G	Navy Fleet Material Support Office	Retail Defense General Supply Center Items	39,409	40,098,686

*Figures are not included in reporting system.
**Figures for cognizance symbol 8S are included in cognizance symbol 2S.

Cognizance symbol	Cognizant supply demand control point, bureau, office or agency	Definition	Line Items	Dollar Value
9L	Navy Fleet Material Support Office	Retail Defense Medical Supply Center material	9,505	$ 12,519,984
9M	Navy Subsistence Office	Navy owned subsistence material	748	43,656,612
9N	Navy Electronics Supply Office	Retail Defense Electronics Supply Center items	141,725	32,390,700
9U	Navy Clothing and Textile Office	Resale clothing and accessories	4,941	9,674,421
9W	Navy Fleet Material Support Office	Retail Defense Petroleum Supply Center items	1,145	20,452,849
KZ	Navy Fleet Material Support Office	Retail Defense Industrial Supply Center items (numeric "19" substituted as cognizance symbol by mechanized activities)	151,383	40,859,789

APPENDIX B

COPIES OF LETTERS SUBMITTED FOR RESEARCH MATERIAL

U.S. Naval Postgraduate School
Box 1978
Monterey, California

January 5, 1965

Mr. Herbert M. Lapidus
Head, Packaging and Preservation
Branch (H32)
Bureau of Supplies and Accounts

Dear Mr. Lapidus:

I am commencing research for a Master's thesis as part of my graduate studies in Navy Management at the U.S. Naval Postgraduate School. Since you are well informed on my selected topic, I thought you might be able to help me in gathering material for my paper. My topic is "A COMPARATIVE ANALYSIS OF PROCEDURES FOR CYCLIC INSPECTION AND PRESERVATION OF NAVY OWNED MATERIAL IN STORE".

In addition to reviewing and describing the procedures prescribed by inventory managers and others for selected categories of material, I plan to concentrate in the following areas:

(1) Importance of the cyclic inspection and preservation program.

(2) Difficulties experienced by stock points in establishing and maintaining an effective program such as budgetary limitations, different procedures by each inventory manager for the many types of material carried, etc.

I would appreciate any literature or comments that you might have in the above areas plus any other areas that you may consider appropriate. Also, please pass one copy of this letter to Mr. E.M. Storey, Jr. (H31) for any information that he may be able to furnish.

I would also like to take this opportunity to thank you for the many times that you assisted me with packaging problems while I was at the Navy Subsistence Office.

Sincerely yours,

Everett G. Brown
LCDR, SC, USN

U.S. Naval Postgraduate School
Box 1978
Monterey, California

January 5, 1965

LCDR Frederick J. Kirch,
Office of Inspector General SC
Bureau of Supplies and Accounts

Dear Fred:

I am commencing research for a Master's thesis as part of my graduate studies in Navy Management and I thought you might be able to help me in gathering research material for my topic "A Comparative Analysis of Procedures for Cyclic Inspection and Preservation of Navy Owned Material in Store".

I would appreciate any literature that may be available as to major discrepancies discovered in the cyclic inspection and preservation program during the course of inspections. This might include failure of stock points to establish and maintain an efficient program, amount of overage material on hand, etc. Also, if you have a contact at the Navy Area Audit Office and the General Accounting Office, reports of discrepancies from their offices would be very helpful.

Sincerely,

Everett Brown

U.S. Naval Postgraduate School
Box 1978
Monterey, California

January 5, 1965

Commander A.K. Colby, SC, USN
Officer in Charge, Supply
Operations Assistance Program
(SOAP) Team,
Long Beach, California

Dear Commander Colby:

I am commencing research for a Master's thesis as part of my graduate studies in Navy Management at the U.S. Naval Postgraduate School and I thought you might be able to help me in gathering research material for my paper. My topic is "A COMPARATIVE ANALYSIS OF PROCEDURES FOR CYCLIC INSPECTION AND PRESERVATION OF NAVY OWNED MATERIAL IN STORE".

I would appreciate any literature or information in the area of material discovered during supply overhauls that is unidentified, improperly packaged and preserved, overage etc. which may be attributed to navy stocking activities ashore. Any SOAP statistics that pinpoint the above plus any other information which you consider appropriate for my topic would be extremely helpful.

Sincerely yours,

Everett G. Brown
LCDR, SC, USN

U.S. Naval Postgraduate School
Box 1978
Monterey, California

January 5, 1965

Mr. K.J. Adams
Director, Systems Analysis
and Procedures Division (D1)
Bureau of Supplies and Accounts

Dear Mr. Adams:

I am commencing research for a Master's thesis as part of my graduate studies in Navy Management at the U.S. Naval Postgraduate School and I thought you might be able to help me in gathering research material for my paper. My topic is "A Comparative Analysis of Precedures for Cyclic Inspection and Preservation of Navy Owned Material in Store".

In order to emphasize the scope of the cyclic inspection and preservation program, I would appreciate a listing by cognizance symbol of the line items and dollar values of Navy owned material on hand as of 30 June 1964 or any other date for which the information may be readily available.

The above information will be extremely helpful in preparing my paper.

Sincerely yours,

Everett G. Brown
LCDR, SC, USN

U.S. Naval Postgraduate School
Box 1978
Monterey, California

February 15, 1965

Storage Officer

Dear Sir:

I am commencing work on a "Research Paper" as part of my graduate studies in Navy Management at the U.S. Naval Postgraduate School and I thought you might be able to help me in gathering material for my paper. My topic is: "A Comparative Analysis of Procedures for Cyclic Inspection and Preservation of Navy Owned Material in Store."

To assist me in this endeavor, I would appreciate a copy of your local instructions which implement the cyclic inspection and preservation program for the following categories of material: (1) Aviation, (2) Ordnance, (3) Automotive, (4) Ship's Parts, (5) Electronics and (6) General Stores Type Material controlled by the Fleet Material Support Office.

In addition, if the information is readily available, comments are desired on the difficulties experienced in establishing and maintaining an effective program. This might include complexity of the problem due to the different procedures prescribed by each of the inventory managers,manpower and budgetary limitations, etc.

The above information will be extremely helpful in preparing my paper.

Sincerely,

Everett G. Brown
LCDR, SC, USN

APPENDIX C

WORK MEASUREMENT REPORTING SYSTEM FOR STORAGE CUSTODY OPERATIONS

QUARTERLY FUNCTIONS

16. FUNCTION 104.01: STORAGE CUSTODY OPERATIONS

a. SCOPE — This function includes maintaining proper storage and care of all material in store, including drummed and packaged petroleum products and lumber; inspecting material in store as required to determine the condition of the preservation and the fitness of material for use; processing of stock number changes, including material handling and rewarehousing incident thereto; initialing requests for preservation of material in store; breaking out and restowing of material to be preserved or repacked for storage, including movement to and from packing and preservation areas; rewarehousing incident to planned repositioning of stocks, including relocation of material between parent activity and geographically removed annexes; all other internal handling within storage areas not specified in other functions, including the operation of assigned materials handling equipment; breakdown of equipment for recovery of usable stock items; actual assembly of spare parts kits subsequent to issue of component stock items; and direct supervision of custody warehousing operations. This function excludes physical handling incident to breaking out and movement of material to disposal (see function 105.02).

b. EXPENDITURE ACCOUNT — 49312 Storage custody operations.

c. WORK UNIT — Measurement tons.

(1) Definition — Sum of total measurement tons of material in storage custody on hand at the end of each month of the reporting period.

(2) Point of count — Work units for this function will be determined quarterly from measurement tons of material in store occupying covered and open storage space, as reported on activity summary NAVSANDA Form 1144 (rev 2-63), Section II, Storage (measurement Tons), line 93.

(3) Backlog — Will not be reported.

d. SUPPLEMENTAL DATA

Line 31. Total number of measurement tons of material in store rewarehoused during the reporting period incident to planned major repositioning of stocks, excluding replenishment of retail outlets and consolidation incident to stowing incoming material.

Line 32. Total number of productive man-quarters expended during the reporting period by civilian, military, and contract personnel in major rewarehousing operations.

APPENDIX D

GUIDELINES FOR CARE AND PRESERVATION OF STOCKS

Guidelines for Care and Preservation of Stocks

(1) Technical material in store designated for retention by inventory control points on a specific item listing or ICP annotation on a NAVSANDA Form 483 will be inspected at periodic intervals to determine the need for represervation.

(2) Inspected ready-for-issue stock on which previously applied preservation has deteriorated, as determined by sampling outlined in enclosure(1) of the basic instruction, will be represerved and repackaged as indicated in reference (b) of the basic instruction. Wherever the original method used for preserving, packaging or packing the items or equipments can be identified, this same method will be used if the items are to be repackaged. If the method cannot be identified, then protection equivalent to that of the old package (in accordance with the best judgment of the packaging supervisor) will be provided. Overage material will not be represerved or repackaged without instructions from the cognizant inventory control point.

(3) Preservation and packaging materials removed from samples for examination to determine the need for represervation, will be replaced or renewed as necessary on items determined to be issuable. Reprocessing of samples and the lot represented by the samples will not be accomplished merely to bring the preservation and packaging in accord with current requirements unless funds are provided or arranged for by the cognizant inventory control point.

(4) Material directed into storage by inventory managers which is packaged Level C (usually commercial level) or Method III of MIL-P-116 is considered to be safe from corrosion under normal storage conditions. Such material will not be subjected to inspection and subsequent represervation under cyclic preservation programs. Repackaging to bring the preservation, packaging or packing in accord with current military packaging requirements or to conform to specified issue quantities will not be accomplished except as deemed necessary at time of issue, unless funds are provided or arranged for by the cognizant inventory control point.

(5) Represervation and repackaging incidental to overhaul, repair, reconditioning or modification will not be accomplished without funding from the cognizant inventory control point.

(6) O&M funds will not be used for inspection and cyclic preservation of stocks exceeding the guidance indicated in enclosure (1) of the basis instruction, except when the inspection records and prior experience of the storage activity justify deviations to the frequency cycles and sampling rates. Preservation programs directed by inventory control points prescribing inspection frequencies and sampling rates exceeding enclosure (1) of the basic instruction will be forwarded to

BUSANDA (H3) for approval prior to diversion of manpower and facilities to such special programs.

(7) Stocking activities will maintain records of line items inspected, items found to be in need of preservation and other pertinent information that will assist in analyzing inspection-preservation cycles and the effectiveness of various types of storage. Inspection records will be used by the stocking activity to provide a basis:

(a) For establishing reinspection schedules.

(b) For adjusting the frequency of inspection and the sampling rates for various storage conditions.

(c) To determine the relative effectiveness of controlled humidity (C/H) storage.

(8) Unpackaged ready-for-issue materials will be visually inspected prior to shipment for assurance of identity, completeness and freedom from damage. This applies only to material which can be inspected without removal of preservation or protective wrappings.

(9) Packaged ready-for-issue material will be visually inspected prior to shipment for adequacy of wrappings, containers and markings. Material in visibly damaged or deteriorated packages will be examined as described above for unpackaged material.

(10) Repairs determined to be necessary as a result of inspections in subparagraphs (8) and (9) above will be accomplished in accordance with references (d) and (e) of the basic instruction and within existing capabilities.

(11) Existing directives which require stocking activities to routinely depreserve, inspect, test and represerve invoiced material at time of shipment will be revised. Instructions will be issued to stocking activities for those specific cases in which technical inspection, exercising or functional testing for proof of operational readiness is required at the time of shipment.

(12) Technical inspection, functional testing, exercising and required repackaging of material will be accomplished prior to shipment as authorized by BUSANDA directives or when specifically requested by inventory control points. Where such work is beyond the activity capability and funds are not cited in the request, the requirement will be forwarded to BUSANDA (H3) for review.

(13) Inventory control points will be notified of material determined defective, damaged or otherwise unfit-for-issue as a result of the technical inspection, functional testing or exercising.

(14) Requests by inventory control points for repairs to malfunctioning equipment will be submitted to BUSANDA (H3) for approval when funds and provision for necessary specialized technicians are not furnished by the inventory control point.

(15) Instructions for issue to stocking activities which require technical inspection, exercising or functional testing having a significant workload impact (i.e., over $1,000 per year) on BUSANDA funding of stocking activities will be forwarded to BUSANDA (H3) for review prior to promulgation.

APPENDIX E

SUMMARY OF CORRESPONDENCE RECEIVED FROM STORAGE OFFICERS AT SELECTED NAVAL ACTIVITIES

ACTIVITY NUMBER	SUMMARY OF CORRESPONDENCE RECEIVED
1	Local operating procedures had not been prepared. Cyclic inspections were being performed only: (1) if the Inventory Control Point had furnished a specific listing of items to be inspected and preserved, such as in the case of SPCC and (2) if it should be determined during routine operations that high priced items were in need of packaging or preservation. The SPCC instruction, on hand at the activity, was obsolete.
2	Local procedures could not be furnished since they were being revised. However, from the information provided, it appears that a limited program is in effect and is conducted primarily on the basis of the cyclic inspection lists that are furnished by the inventory managers.
3	A formal inspection program was not in operation due to rapid turnover of inventories and limited funds. The only inspections being performed are on (1) supplies while in or outbound for quality assurance and (2) items on SPCC's cyclic list, when manpower is available.
4	Local procedures were not in writing, but the correspondence implied that the activity was trying to make an effort to comply with the intent of most directives.
5	Operating procedures had not been prepared. From the information given, it appears that an effective program is not in operation.
6	Local procedures were not in writing nor were inspections of any type being performed.
7 & 8	Reply was not received. This is interpreted to mean that an effective program is not in effect.
9	Operating instruction had been prepared. However, they did not appear to be very effective since; (1) they only described the mechanics of the inspections. The problem area of "when" and "how much" was not included and (2) the instruction did not enclose or reference the applicable Inventory Control Point instructions or the Bureau of Supplies and Accounts guidelines.
10	Procedures, which covered all categories of material requested by the writer, had been prepared. However, additional information provided indicated that the actual inspection program was active primarily only on items included in cyclic listings.